Small bowel obstruction due fecaloma in young male (Phytobezoar) without underlying risk factor.

Abstract:

Small bowel obstruction (SBO) due to fecal matter, though rare, involves the accumulation of hardened stool (fecalomas) leading to a blockage. This condition can cause significant morbidity and may require surgical intervention if non-surgical methods fail [1]. Fecal impaction can exert pressure on the intestinal wall, causing ischemia, inflammation, and even perforation. These complications can be severe, with high mortality rates, particularly in older adults and those with comorbidities like neuropsychiatric disorders or chronic renal failure. We are presenting a case with similar scenario for a young patient, who is not having any mental or neurological, medical issues [2].

Introduction:

Small bowel obstruction (SBO) poses a significant challenge in clinical practice, often requiring urgent intervention to relieve symptoms and prevent serious complications. While SBO can result from various etiologies, including adhesions, hernias, and tumors, one lesser-known yet notable cause is fecaloma [3].

Fecaloma refers to a concretion of hardened fecal matter that accumulates within the small bowel, obstructing its lumen and impeding the passage of intestinal contents. This condition typically arises because of chronic constipation, where prolonged retention of stool leads to dehydration and compaction of fecal material [4]. Over time, this compacted mass can become adherent to the intestinal walls, forming a hardened obstruction known as a fecaloma.

The pathogenesis of fecalomas in SBO often involves many complex factors. Chronic constipation, often exacerbated by factors such as inadequate fluid intake, low-fiber diet, sedentary lifestyle, and certain medications, predisposes individuals to fecal impaction. As fecal material accumulates and becomes increasingly desiccated, it can form dense, immobile masses that are resistant to spontaneous passage [5].

Clinical manifestations of SBO due to fecaloma typically manifest gradually, reflecting the progressive nature of fecal impaction. Patients may initially experience nonspecific symptoms such as abdominal discomfort, bloating, and changes in bowel habits. As the obstruction worsens, symptoms escalate to include severe abdominal pain, distention, nausea, vomiting, and obstipation, the inability to pass stool or gas [6,7].

Diagnosing SBO secondary to fecaloma relies on a combination of clinical evaluation, imaging studies, and laboratory tests. Abdominal radiography may reveal characteristic findings such as dilated loops of small bowel with air-fluid levels and a paucity of gas distally, suggestive of mechanical obstruction. Computed tomography (CT) imaging is often employed to delineate the site, extent, and etiology of the obstruction, aiding in treatment planning [8].

Management of SBO due to fecaloma necessitates a multidisciplinary approach, tailored to the individual patient's clinical presentation and underlying comorbidities. Initial management focuses on supportive measures to stabilize the patient, alleviate symptoms, and correct fluid and electrolyte imbalances. Non-operative interventions such as bowel decompression with nasogastric suction, hydration, and administration of prokinetic agents may be attempted initially [8].

However, in cases of severe or refractory obstruction, surgical intervention may be warranted to relieve the obstruction and address underlying factors contributing to fecal impaction. Surgical options range from minimally invasive techniques such as endoscopic decompression or stent placement to more extensive procedures such as bowel resection and anastomosis [9].

Case presentation:

A male of 27 years old presneted with severe colicky pain associated with vomting and fever. He sough medical advise at private clinic and received metronidazol. Hyoscine and analgesia. His condition was not improving and intialy was having open bowel. As per his history his pain started periumbicus and shifted to rigfht side, there was no history of similar condition or previous surgery. He denied ingestion for any particle mimic foregin bodies. On examination, he was in severe pain, vitaly stable, tender right side of the abdomen. His routine blood test and urine were normal. So we proceeded for CT abdomen, which showed feature of small bowel obstructions and earli signs of smal bowel obstructions and inflammation. We kept the patient for observation fromm night till morning and because he was expericing persistant pain , we decided to go for diagnostic laparoscopy. The intra operative findings were feature of small bowel obstruction, visible mass at ileum cauding obstruction. We performed enteriotomy and extracted solid fatty calcified stool without hairy component or collection. The procedure wad done smoothyl, cleaning the abdomen after drain insertions. The post operative course was unevetful.

Figure 1: : contrast enhnaced CT of the abdomen and pelvis axial image revealed signs of small bowel obstruction down to ileal loop in terms of bowel dilatation proximal to well defined intraluminal filling defect showing mottling appearance denoting fecal matter (black arrow) measuing about 3.5x3.5 cm at the right paramidline pelvic region ,no sign of perforation or bowel ischemia

Figure 2: : contrast enhnaced CT of the abdomen and pelvis sagittal image revealed signs of small bowel obstruction down to ileal loop in terms of bowel dilatation,multiple long air/fluid levels proximal to single well defined intraluminal filling defect showing mottling appearance (black arrow)denoting fecal matter similar to small bowel faeces sign measuing about 3.5x3.5 cm located at the right paramidline pelvic region,minimal pelvic free fluid collection no sign of perforation or bowel ischemia.

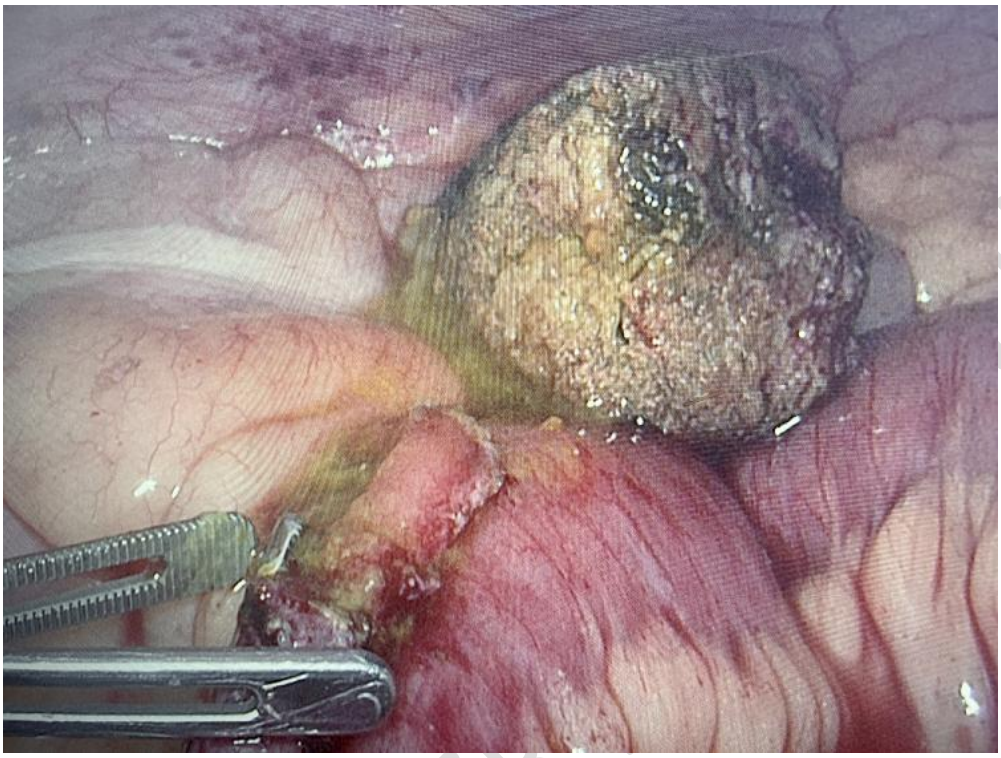

Figure 3: intra operative findings, solid fecall ball, extracted after enteriotomy.

The histomorphological features are in keeping with the diagnosis of Small Bowel Phytobezoar, shows fecal matter containing abundant non-polarizing material, composed of vegetable matter (vegetable remnants), focally showing areas of microcalcifications. One tiny piece of superficial small intestinal epithelial lining seen.

Discussion:

Fecaloma Fecalomas, or hardened masses of stool, can lead to serious complications, particularly when causing small bowel obstruction. These complications arise due to the pressure exerted on the intestinal wall, leading to ischemia, inflammation, and potential perforation. The complications can be classified into effects on the intestinal wall, lumen, and adjacent structures, each presenting distinct challenges. Management typically involves both non-surgical (hydration, laxatives) and surgical interventions, especially in severe cases. Prognosis varies, with higher risks in older adults and those with underlying health conditions [10]

The mortality rate for complications arising from fecaloma can be significant. Studies indicate that death secondary to fecal impaction complications is higher in older adults and those with pre-existing conditions like neuropsychiatric disorders and chronic renal failure. Specifically, in the elderly, the mortality rate can reach up to 32%, while in patients with chronic renal failure, it can be as high as 43%. These figures underscore the severe risks associated with untreated or poorly managed fecalomas [11].

CT (computed tomography) plays a crucial role in diagnosing fecalomas and their complications. It provides detailed images that help identify the location, size, and extent of the fecal impaction, as well as any associated complications like bowel obstruction, perforation, or ischemia. CT scans can distinguish fecalomas from other types of obstructions and masses, aiding in accurate diagnosis and guiding appropriate treatment strategies. This imaging modality is particularly valuable for its ability to provide comprehensive information quickly and non-invasively, which is essential for effective management [11,12].

Conclusion:

In conclusion, while SBO due to fecaloma remains relatively uncommon, its recognition and management are paramount in clinical practice. Understanding the pathophysiology, clinical manifestations, and diagnostic approach to this condition are essential for timely intervention and optimal patient outcomes. Further research into preventive strategies and therapeutic modalities may help mitigate the burden of SBO secondary to fecaloma in the future [2,12].

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